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A GUIDE TO
MODELLING IN CLAY AND WAX

AND FOR

TERRA COTTA,

BRONZE AND SILVER CHASING AND EMBOSSING,
CARVING IN MARBLE AND ALABASTER,
MOULDING AND CASTING IN PLASTER-OF-PARIS

OR

SCULPTURAL ART

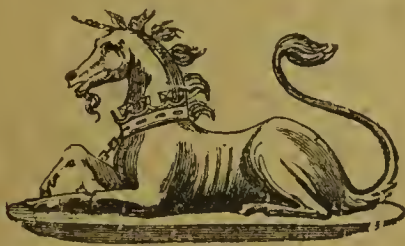
MADE EASY FOR BEGINNERS

BY

MORTON EDWARDS

PROFESSOR OF MODELLING

SEC. SOC. SCULPTORS, 1862; EDITOR OF 'FINE ART MAGAZINE,' 'SCULPTORS' JOURNAL,' 1863
SEC. LIT. AND ARTISTIC SOC. 1872; SEC. GLYPIC SOC. 1876; &c.



VITA
DULCIS PER ARTEM

FOURTH EDITION

LONDON

LECHERTIER, BARBE, & CO.

Artists' Colourmen

60 REGENT STREET, W.

1891

Price One Shilling



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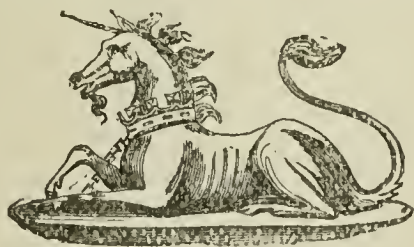
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Dedicated

(BY PERMISSION)

TO

H.R.H. THE PRINCESS LOUISE

MARCHIONESS OF LORNE

PREFACE.



THE inquiries made, from time to time, for a book on Modelling have induced me to arrange this from notes of letters written years back to pupils at a distance, who wished for directions in the absence of personal instruction. On going again through them, I am happy to find they stand the test of a matured experience. I have added whatever I considered would assist to make the information complete within the limits of so small a book, at the same time endeavouring to express the several early processes clearly and simply for beginners. There is to me the greatest pleasure in doing so, as it may, in its printed form, find its way to many of those who are desirous of working in clay or wax, perhaps to some who have tried and, for want of the proper instruction, have been discouraged, and, it may be, have abandoned the pursuit of an interesting occupation. Having now been engaged in the profession of sculpture for over thirty years, during twenty-five of which I have given lessons in modelling, and been a frequent contributor to the Royal Academy, and to the different other Exhibitions held during that space of time, my remarks may

be held to have a certain amount of importance, to which study under the late celebrated sculptor William Behnes (the Lawrence of sculpture), from 1852 to 1854, and abroad almost yearly, especially at Rome, with and under the late John Gibson, R.A., in 1859, undoubtedly adds some weight.

MORTON EDWARDS.

60 REGENT STREET, LONDON:

March 1879.

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GUIDE TO MODELLING IN CLAY AND WAX ETC.



CHAPTER I.

SCULPTURE may be defined as the art of either modelling or carving a representation of any given object in a pliable or hard substance.

The list of materials the sculptor has employed in various ages is almost endless; I shall, however, give the principal, and refer to some originals that have been preserved. The art from the earliest times has had admirers, and its highest claims to attention are—

From its antiquity and the purposes for which it has been employed.

For the evidence recorded by its instrumentality of the civilisation and refinement of nations, and their rise, progress, and decline.

The facility with which the Beautiful could be rendered comparatively indestructible and remain to show what the

genius of the age could do in pleasing the eye and gratifying the taste by executing facsimiles of the most graceful forms, of which Nature in all ages has been so bountiful.

The antiquity is undoubted. It is sufficient, without other authority even, to refer to the mention of the art in the Books of Moses.

The Israelites, after the Exodus, were warned to 'put away the false gods,' and again, Rachel 'stole the images that were her father's.'

There is no mention as to what they were like, but they must have been small, as they were concealed with facility, when Laban 'searched the tent, and found them not.'

The earliest names of sculptors on record are in the thirty-fifth chapter of Exodus, where we are told that 'the Lord called by name Bezaleel the son of Uri, and filled him with the spirit of God to devise curious works in gold, and silver, and brass, and the cutting of stones.' With his name is associated that of the son of Ahisamach. The date of this would be about B.C. 1500.

The precursor of sculpture in its earlier stage was nothing more than the application of a rude unformed block of stone, or, in some instances, heaps of stones, to serve as an altar, record, landmark, or to perpetuate the memory of the deceased, and to hand it down to posterity.

As examples it will be sufficient to refer to the eighth chapter of Genesis, where Noah 'builded an altar to the Lord'; the heap of stones set up by Jacob at Bethel; those to commemorate the covenant between Jacob and Laban; the grave of Rachel; and the stone set up by Joshua as a witness. As late as the time of Pausanius, A.D. 170, some structures of this kind were in existence, but commemorating idolatrous worship, such as that of Juno at Thespis, Jupiter and Diana at Sicyon, and the Venus of Paphos.

That the first efforts of the statuary were extremely rude may be gathered from the fact that they were little more than quadrangular blocks of stone.

The supposition is, that the addition of heads, arms close to the sides, and legs not even attempted to be separated, were the earliest endeavours to produce a likeness of the human form.

Homer mentions the Phœnicians as skilful artists or workmen, and when Solomon built the Temple (about B.C. 1000) he sent and fetched Hiram out of Tyre, and his workmen; ‘and his father was a worker in brass, and cunning to work all works in brass, and he came to King Solomon and wrought all his work.’

The record goes on to say that he cast two pillars of brass of eighteen cubits high apiece, and he made two chapiters of molten brass, to set on the tops of the pillars—these chapiters being decorated with lily work and pomegranates. The doors were of olive tree, and carved with carving of cherubim, and palm trees, and open flowers, and were overlaid with gold. He made also a molten sea of brass with twelve oxen, and on the borders were lions, and oxen, and cherubim.

This proves the knowledge of casting in metal and carving in wood at this date, and indeed, probably, far before, because these works must, from their size and character have been of a high style of art.

The monuments discovered in Egypt are stated to prove the existence of a finished style of art long anterior to any written record we possess. Owen Jones said: ‘The Egyptians built for immortality, and obtained it.’ In all other nations the history of sculpture has been a rapid ascent from its infancy to its culminating point—from thence a slow and lingering decline; but in Egypt the farther we go back the

more perfect is the art ; we have no trace of its highest point of perfection, much less any of its infancy.

In Egyptian art, the parent of every other, the sculptor, the painter, and the architect were nearly equally employed ; in fact, their productions were so intimately united as to be inseparable. In Egypt there has been found, in the most perfect temples, stones built into the wall, having on their inner side hieroglyphics ; these hieroglyphics being of a higher character of art than can be found on existing monuments, and are evidently stones from more ancient buildings.

The most perfect specimen of Egyptian art yet discovered is believed to be the tomb removed by Dr. Lepsius from the neighbourhood of the Pyramids, and now in the Berlin Museum.

The sculpture of Egypt was regulated by the religious laws of this remarkable people, and remained through ages unchanged in its general forms.

Its artistic character, however, was constantly in a state of decline, from the earliest known examples through the Ptolemaic period to the Romans. At this latter period it was practised without feeling or love—merely on the traditions of the past—and it then partook more of the nature of a mechanical art, the peculiar grace and refinement of the earlier periods giving place to coarseness and vulgarity.

CHAPTER II.

A HIEROGLYPHIC or incised mark on a block of stone or upon a wall or rock was one of the first sculptures probably ever produced.

The first specimen of Modelling ever executed, perhaps, was the ornamentation of the knob of the cover of one of those enormous crocks or vases fabricated without the aid of a wheel, the use of which goes back for many centuries before the Christian era.

Specimens of these jars are not very numerous in museums, yet they are occasionally turned up in Southern Europe, Asia, Africa, and South America.

The tub of Diogenes was in reality one of these immense jars, crocks, or vases, according to Lucian's description, and there are or were several in the museum at Sèvres which might have served as a habitation for the cynic. They have generally been used for the storing of grain, fruit, oil, &c. ; also, in many parts of America and Brazil, instead of coffins, the body being forced into them in a sitting posture, after some preparation to prevent decay. The knobs on the covers were frequently formed into a representation of the head of the deceased, and when ansated these were often hands ; in some specimens also the handles even had arms attached to them. On the covers of the Egyptian coffins the resemblance of the deceased was produced on an enlarged scale, swathed in ban-

dages, and, in fact, it is very doubtful which is the earlier of the two, the carving in wood of the outside of the coffin as the similitude of the enclosed body, or the modelling of a representation of the head of the deceased on the knob of the cover of the crock.

Some of the cinerary urns of the Etruscan period have the covers made in the likeness of the deceased.

In the more artistic of these vases the bust of a beautiful female has evidently been the idea the potter has attempted to model.

From examination and comparison it seems pretty clear that the adoption of the human bust as a type was suggested by a fancied resemblance between the human figure and a vase. A bust may be executed to imitate a vase, and thus combine the useful with the beautiful, and the 'Clyte' in the British Museum might be cited as an instance in which the vase form is partially produced.

The leaves springing upward from the pedestal and encircling the slightly draped bust would almost make it apparent that the artist had intended it to be so.

Temples and their adjuncts, ornamental or otherwise, have been discovered carved from the solid rock.

Statues also—the great Sphinx is an instance of a colossal statue partly carved from the rock and partly built up of stone. It represents a crouching lion's body, with the head of a man. From excavations made at different times it has been ascertained to be about one hundred and eighty feet long from the fore paws to the tail. It is the largest statue ever made and the oldest remaining. The Sphinx has for some centuries past been nearly covered with sand, the head and portion of the neck only being visible, and is in the state represented at the commencement of this book.

The Sphinx is in front of the second in size of the Pyramids, and stands, together with them and various smaller structures, on the low range of Libyan hills which divide the sands of the desert from the cultivated lands near Memphis.

How natural was it, in later ages of less industry and ambition, for people, when gazing at these wondrous works, to suppose that men in days of old were of larger stature and of longer lives than themselves!

The highest point attained by sculpture was by the Athenian Phidias and the Attic School in the golden age of Pericles, about B.C. 460; and from this period to the taking of Corinth by the Romans sculpture held the highest place in art.

The Greeks coloured many of their marble statues, reliefs, and other sculptured work, and indeed, perhaps, much of the temples of which these were the ornamental portions. The principal statue of the god or goddess to whom the temple was dedicated was made up of ivory and metals—sometimes the statue was of marble coloured or tinted—with ornaments of gold and precious stones.

They used a variety of materials for their sculpture—viz., iron, lead, bronze, ivory, gold, silver, amber, &c., &c., and all descriptions of wood. Different coloured marbles were used in their busts and statues. Bronze helmets, shields, spears, ornaments, clasps, and sandals were by no means uncommon.

Inlaid eyes, and, in fact, everything that could conduce to render the work a complete and gorgeous arrangement of the sculptor's work in all its branches, was brought into play.

Some specimens, either complete or mutilated, but, where the latter, showing the traces, may be seen in the British Museum. But in the Vatican Museum at Rome there is a splendid collection of works of sculpture in all materials more or less perfect.

From the period of the birth of Christ there may be said to have been a constant decline in the art. It is true that there was much fine work executed in Italy from the thirteenth to the sixteenth century by Michael Angelo and other sculptors, and that other countries have done their best ; but nothing has, ever since the best Greek period, been executed that will for a moment bear comparison with it, either in design or in finish. Perhaps the nearest approach has been in the present century ; and if sculpture can continue its advance, it is possible that the next may see it emulated, though it is never likely to be excelled.

Later on we come to Canova and Thorwaldsen, artistic rivals at Rome, the gifted Northman holding the first place in art's metropolis.

Having thus given an abstract of some of the most important points in the history of sculpture in ancient times, and following it to those immediately before our own, we will proceed to bring it down to the last few years.

John Gibson, R.A., the sculptor, revived the process of colouring marble statues, and Baron Marochetti, R.A., of Turin and London, introduced it in some of his busts—both with considerable success.

There seems to have been latterly a much more favourable opinion respecting its employment, for there are many who think very highly of the results obtained by colouring or tinting marble statues both among sculptors and artists.

The public generally have been in favour of it always.

It is only because artists and sculptors have been educated to view the white marble as perfected work that it is preferred.

The public generally say, Give us a picture—sculpture is too cold ; and they are in a measure right. What should we say

of any one who esteemed a black and white crayon drawing of a picture more than the picture itself in all its glory of colour?

The reason that china or painted pottery figures are more purchased than marble sculpture, and far higher prices given than the cost of their production should warrant, is the love of the people for colour.

And when the arts shall be truly joined again, the sculptor will design and model the statue, the painter will colour or tint it, and the architect will design the pedestal for it and the gallery to contain it. This, again, will be enriched and ornamented by sculpture and decorated and painted by artists, and then, and not till then, will sculpture have its proper place in the arts.

The young of the present generation who now see sculpture so lavishly adorning Exhibitions, National and International, Royal Academy, Albert Hall, South Kensington, and other museums—the various galleries, metropolitan and provincial, and at the show-rooms of manufacturers of pottery, will perhaps be somewhat surprised to learn that previous to the year 1851 there was but little sculpture to be seen by the public in London.

A few busts and statues at one or other of the *then* Exhibitions, that is, the small sculpture-room of the Royal Academy at Trafalgar Square before its enlargement was carried out, the British and Suffolk Street Galleries, and the collection, Egyptian, Grecian, and Roman, but lately placed in the new rooms built for them at the British Museum.

There were no Parian or terra-cotta manufactures (at any rate on their present scale) to bring out copies of a reduced and portable size of antique and modern sculptural art.

I must not, however, forget that the taste of the British people for sculpture had been educated and fostered to a certain degree by those Italian *formatori* who settled here from time to time, and who, true to their natural love for art disseminated plaster copies or casts (not always of the best, it is true, but still better than none) by the men they employed, and who wandered selling them throughout the length and breadth of the land, before, if I am not mistaken, there was any other publicity given to sculpture here.

But the Great Exhibition of 1851 was the forerunner and cause of most of the improvement that has taken place for sculptors: producing a revival in taste—inaugurating, as it were, a new era in art—and aided with the developments that have sprung from it in the shape of collections and schools of art, in bringing before and within the means of the millions those beauties of art which before were only within the reach and possession of the opulent.

In addition to these must not be forgotten the munificence of those patrons of art who have bequeathed their collections to swell those that have been accumulated by the nation.

CHAPTER III.

PHOTOGRAPHY also has tended much to popularise sculpture, by placing before the public copies of works—antique and modern, British and foreign art; works many of which they would perhaps never have heard of, certainly never have seen, but for the photographs in the shop windows, and small prints of which are sold by thousands or hundreds of thousands for a few pence each.

It may therefore be very reasonably inferred, if indeed we may not take it to be an established fact, that with all this display of the Beautiful in form there must be a great improvement in the public taste, and that a desire is awakened in many who wish to copy and to try what they can do in Modelling, as so many do in painting, either in oil, water-colour, or on china, and who wish to say, ‘This is my work; look at it; tell me what you think of it.’

It is not convenient for some to go through the course of study necessary to be observed by students in a school of art, therefore private lessons must be resorted to, and in some instances these are not to be had, either by reason of distance or some other cause.

But in this latter case the explanations here given will probably assist the amateur or student much, and perhaps help to pass away many hours—instructively, there is no doubt; pleasantly, let me hope also.

It may be that in a reflective mind these recreative studies.

will expand into original design—if successful, perhaps also profitable; but certainly productive of good, as they will tend to promote industry and concentration of mind upon a given object. They will teach also admiration and appreciation of the labours of others in their several walks of art.

To those who have a knowledge of drawing the work will be easier, but persons who are not accustomed to it are earnestly recommended to practise drawing as much as possible, for it will be found to aid the sister art of sculpture much more than would be imagined.

To the invalid, and to those who are confined to the house by accident, it will, by diverting and occupying the mind, aid in the recovery to health and strength; while to the young of both sexes it will be always a relaxation and a pleasant employment for winter evenings, and bad weather in any season, both in town and country. Modelling has been sometimes hastily condemned as being dirty and unfit for a room, but the writer has given lessons to many of the ladies of the nobility in their drawing-rooms without causing either dirt or derangement to carpets or furniture. Indeed, Modelling has had among its votaries a large number of ladies, foremost among whom in rank may be noted H.R.H. the Princess Louise, Marchioness of Lorne, who has shown considerable talent in the art (amongst Her Royal Highness's works may be specially mentioned a marble bust of Her Majesty Queen Victoria in the Royal Academy); and a daughter of the late Louis Philippe, King of the French, who, unfortunately, did not live to continue the practice of the art she was so proficient in.

One, at least, of the works from the studio of this talented princess is well known here—the statuette of Joan of Arc, Maid of Orleans.

There are, of course, always those who are careless and dirty, but really there is no reason why, with moderate care and attention, more mess should be made in modelling in clay than in painting in either oil or water-colours.

If the pursuit is persevered in, and models and casts accumulate, then, in preference to these being put away into cupboards or otherwise, if there should be a spare room, it might be as well to knock a few nails in the wall, and hang them up and have them in view, serving thus two purposes—one to have form always before the eye in one shape or other, and the other to make as it were a sort of amateur studio; for with all your works, examples, copies, utensils, and tools, kept together and in order, study is easier and work becomes a pleasure.

CHAPTER IV.

IN Modelling we express the ideas by form, copying any given object in clay or other material of a soft and pliable nature.

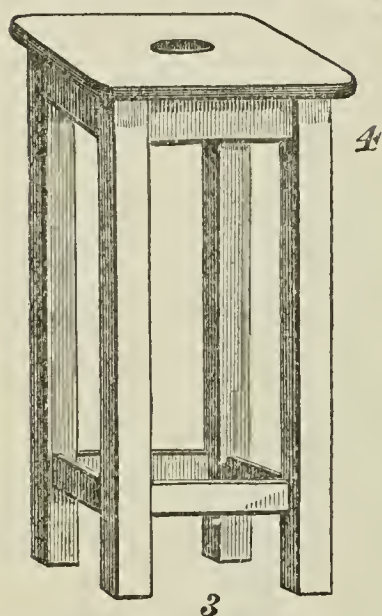
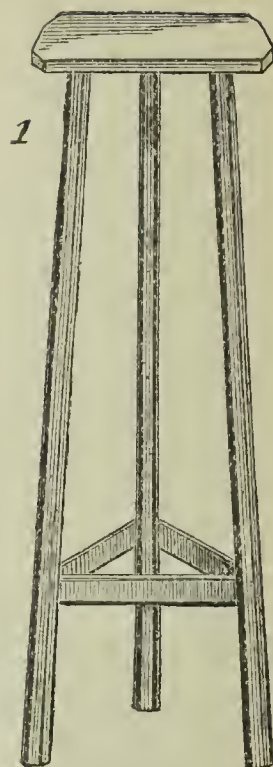
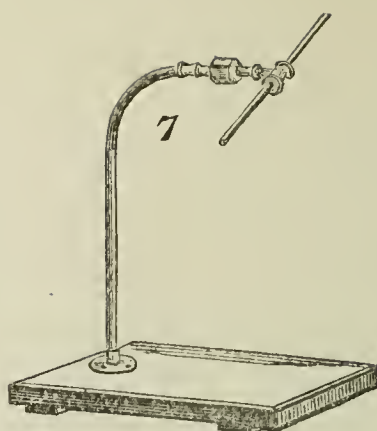
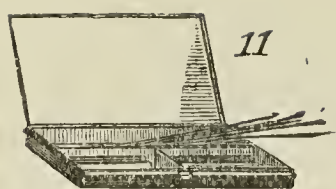
The work may be either in the round, as it is termed—such as a bust, torso, statue, or group—or alto- or basso-relievo. It may be made also of the same proportions, or extended or reduced in size as taste or convenience may suggest.

Clay is used by sculptors, it having been found by the experience of time to be the most suitable material for the purposes required.

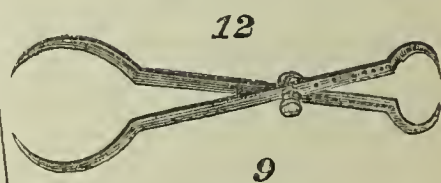
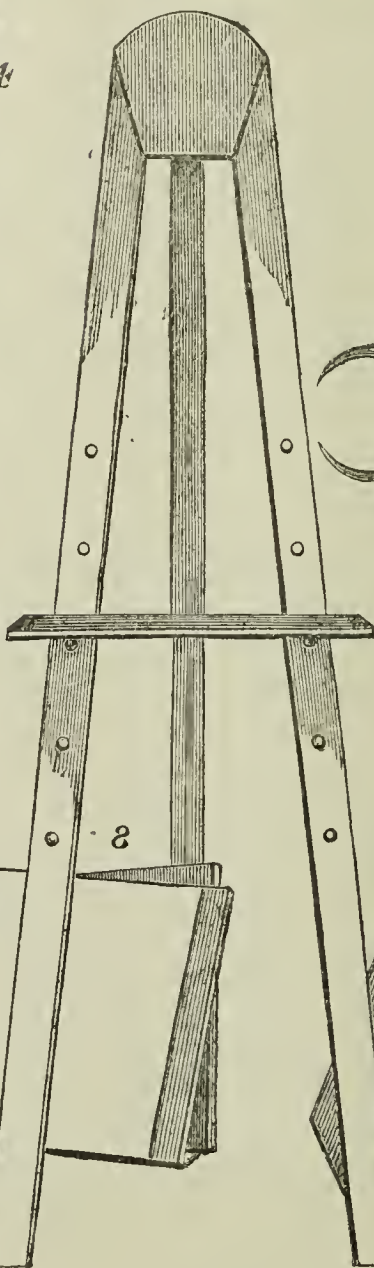
It is easily manipulated, keeping moist, and of an even consistency with moderate attention, and thus allowing of all necessary alterations, by adding to or scraping away with tools, so as to be moulded by them and the fingers to the required form.

I shall suppose the reader to be quite unacquainted with the process, and to have either want of means or inclination to purchase the appliances that are used for the work.

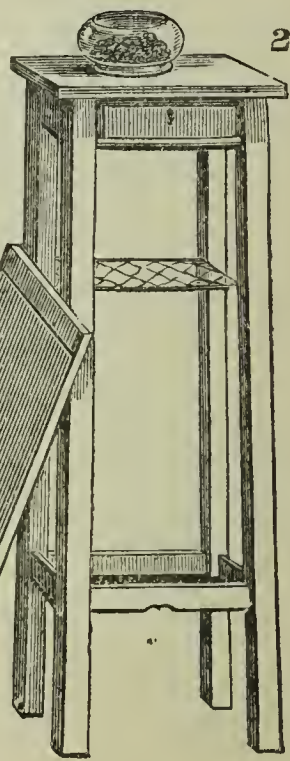
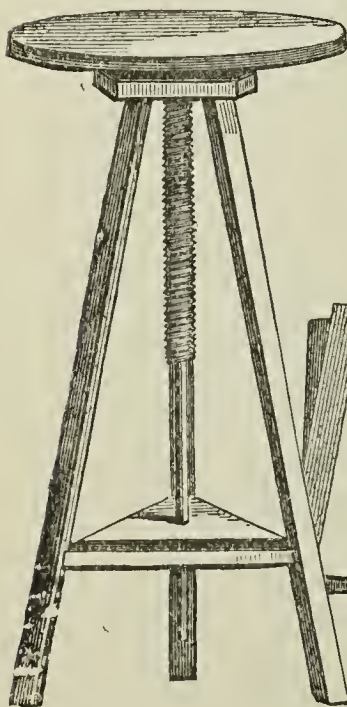
In this case a small table with a piece of board placed upon it, a small quantity of clay, and a few tools of various sizes, say ten or twelve, and a plaster copy of one of the feet of the Venus de Medici, or a cast of the face of the Apollo, or some other of the antique masks, will be nearly all that is required for commencing. But as all work is generally better executed when the usual professional appliances are brought to the aid



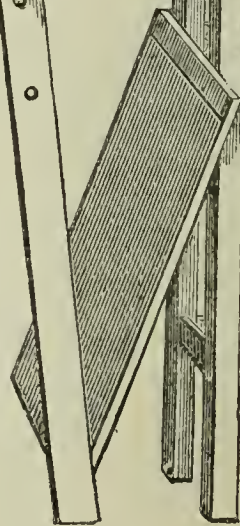
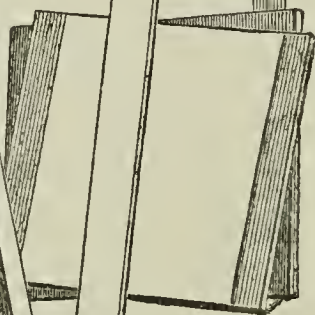
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of the amateur or pupil, to purchase a few of these at an expense say, of from three to seven pounds inclusive, will be the best course, probably, to pursue. There has been a want of information, however, as to the size and shape of these, except to sculptors themselves, and they have varied much also according to individual taste, so that, in the absence of any recognised pattern, measurements have to be procured and drawings made of them for the carpenter; and to make any single article is, as every one knows, always to enhance its cost, besides the amount of trouble and loss of time in all this, and after all the possibility of orders being misunderstood, and in that case a disappointing result.

So, to obviate this, I have had a set of patterns made (from the most useful and best designs, and of a lighter character than those in studios) of articles that are most required by the student. These patterns have been submitted by me to the Society of Arts, it being the first time that an attempt has been made to introduce a uniform set of studio appliances for sculpture after the manner in which artists' materials are now sold.

Messrs. Lechertier, Barbe, & Co. have these on view and sale at a price within the reach of most students of the art, and a selection may be made from them. They are as below :

1. Stand for model, three legs.
2. Stand, with drawer, wire and wood tray, and turning top, four legs, with or without extra top.
3. Stand, circular top elevating.
4. Stool, four legs, sloping top.
5. Modelling easel.
6. Bust support.
7. Statuette support.
8. Turn-table.

9. Damper.
10. Portable modelling case for students—clay work.
11. Portable modelling case for students—wax work.
12. Double callipers for extension or reduction.

The woodcuts show these appliances. The stands are made three feet eight inches in height, but as that may be too high for some persons, they can easily be cut down to, say, three feet two or four inches. It is particularly recommended that as much work should be done in a standing posture as can conveniently be executed—that is, by those who desire to really work at the art—as it is better to step away from the work to a little distance from time to time. The faults are seen better than when constantly bending over the work; and the upright position is soon found to be less fatiguing than sitting.

However, the stool with the sloping top, made of twenty-six inches in height (which can be cut down to twenty-two or three inches, to suit the height of the stand) can be used from time to time.

The stand No. 2 is the most useful. The revolving top is fourteen inches square, and another top fourteen inches by twenty-eight can be used instead of that for larger work; and either will form a modelling-board for basso-relievo.

The light that proceeds from the north or east is the best; and to enable it to fall at an angle upon the work, the lower part of the window should be darkened by a piece of green baize or other suitable means.

If a north or east light be not obtainable, it may be enough to model in a light not under the direct rays of the sun.

When the model chosen to copy is such as the foot spoken of previously, it should be placed on the left hand side of the stand, and a small modelling board on the right.

Moisten this slightly with water, and, having your clay close at hand, commence to build up, by taking pieces about the size of a walnut, and press them well together, forming a rough representation of the form to be copied; then, having your tools ready, select one of the largest size serrated.

Hold this firmly in the hand, and, with a free action of the wrist, commence to go over the work to bring it to a more regular surface.

After this it may be left, if preferred, to another time.

The clay should be of an even consistency, easily moulded with the fingers.

A piece of linen, or calico (unbleached is the strongest), sufficiently large to quite cover the work, should now be well wetted, wrung out nearly dry, and wrapped round your clay model.

CHAPTER V.

I SHALL suppose that the work is recommenced the next day, and that you have provided a stand, as mentioned previously, having a drawer for the tools, a tray of galvanised wire below it for the tools in use, and the damper, and a wooden tray below that, for the cloth or other things that may be required to be handy from time to time as the work progresses.

Thus we shall have—

Stand.

Stool.

Tools.

Damper.

Compasses.

Callipers.

Rule.

The tools need not exceed eighteen, though three dozen will be a complete set—say, four or eight wire tools, set in wooden handles ; ten or twenty wooden tools of different sizes, some serrated ; and four or eight ivory tools, varying in size.

A pair of iron compasses, and a pair of wooden or brass callipers—the extending and reducing callipers will be found the most useful—a damper, or sponge, fitted in a glass dish, or foot, to moisten the fingers from time to time, that being very essential for smooth and good work. The rule will be found useful at times. It is better to have one of three feet, folding in four joints.

Having taken off the cloth, damp the fingers and thumb by passing them over the wet sponge, and proceed to smooth over the marks made by the serrated tool in the first working, carefully noting afterwards where it is necessary to apply more clay. The clay must not be taken up in such large pieces as before—a piece about the size of a nut, or smaller, as required to be used.

Now go over the work again with one of the tools with finer teeth, to take off where there is too much on, gradually bringing the work to a more advanced stage. Then, again, with the fingers and thumb, smooth it, and acquire as much as possible the habit of using the latter. Press, while working, as firmly as possible, so as to knead the clay well together, and not leave it lumpy, or with spaces or holes under, as they will give much trouble when you come on to the finish, requiring to be filled up continually. The model may now be left wetted as before.

Take care to have a small basin of water near you, and with a piece of wet linen wash all the tools that have been used, and either leave them on the wiretray to dry, or else dry them with a cloth, and place them in the drawer. They are then ready for your next working; as cleanliness and neatness will save much time and loss of temper.

If this is not done the clay dries on the tools, and is transferred to the model of a different consistency, and it becomes lumpy; besides which it crumbles, and then, dropping on the floor, treads about, making a mess that is quite unnecessary, and that a little attention will easily avoid.

Wash out the sponge and replace it in the glass dish.

Put the spare clay in a basin or box of convenient size and spread a damp cloth over that also.

Bear in mind that it should be kept at as nearly as possible

the same temper as when purchased, and thus softer than the work to which it is to be applied.

The model may be gone on with or not the next day, as may be convenient, but take care to damp every day to have it in good working order.

Now, supposing it to have assumed the general form of the foot with the toes laid in :—

Note all the prominent parts and the depressions, working on them with the fingers and thumb as far as practicable.

Next clean off the ground with a serrated tool, leaving it in that state for the present, and go into the detail of the work.

Take your measurements with the compasses and callipers to ensure correctness, for though it is better to measure by the eye, yet that has still to be educated and it is a process of time.

It is better to measure at first with compasses, as thus you will see where you have on too much or are deficient more quickly. After this you will use such of the tools as may be found convenient to model in the nails and to go into those places that are too small for the fingers to smooth.

The model may again be left at this stage, and looked at with a fresh eye the next day, and the necessary corrections made.

It should now be as far finished as can be expected for the first model, and may be left to dry or broken up to form another model

Do not be discouraged if you find that while it has a general resemblance it is much wanting in finish, or by the critical remarks of your friends. Recollect that finish is only to be acquired by constant work, and also that you have before you one of the masterpieces of art, and that if you could make a perfect copy of it you would not need further instruction.

CHAPTER VI.

IN the last chapter the foot was supposed to have been the object to be modelled.

In this the face or mask will be treated of.

It might perhaps be preferable for the face of Apollo or other antique mask to be worked in an upright position, instead of being laid on a small modelling board as the foot was. In this case suspend the mask either from the wall or from a stick of sufficient height. This stick must have a weighted foot, such, for example, as being inserted into a large lump of clay, which can be put on a plate, or in any other manner that may be convenient.

The principal thing is that it should remain steady and solid. Then procure a bust support, No. 6. This is a wooden stand of about fifteen to seventeen inches high, with the foot about twelve inches wide by ten inches from front to back.

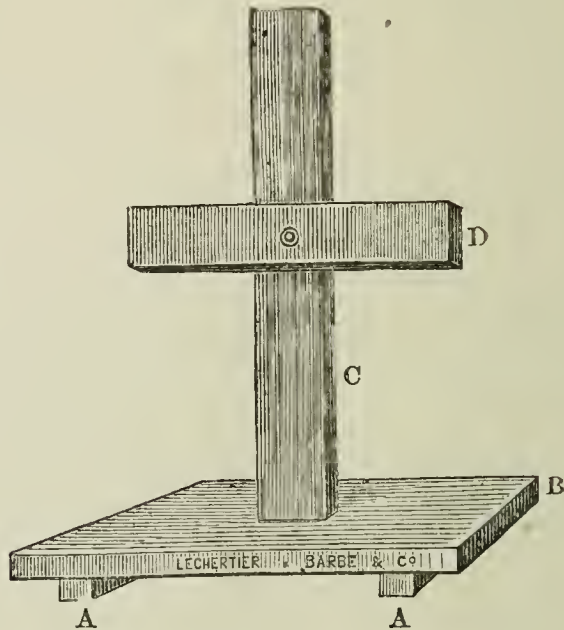
If at too great a distance, it may be made by a carpenter as shown on the next page.

This support will be equally of use, as its name imports, for the bust or for your present purpose.

Wet the wood-work and build up the clay around the upright and cross stick. Place the clay so that the neck of your mask is supported on a sort of square pedestal of clay about three parts of the size of the wooden foot.

Now extend the work well above and beyond it.

Block in the rough resemblance to the mask or face, and then proceed as previously instructed for the foot.



- A A Two battens of $\frac{1}{2}$ -in. wood.
 B Foot of inch wood 10×12 .
 C Upright piece 1 in. by $1\frac{1}{2}$ in., 17 in. high, fastened at back by iron bracket and mortised into the foot.
 D Cross piece fastened by screw 5 in. or 6 in. long, $\frac{3}{4}$ -in. wood.

THE TORSO.

A Torso, as it is termed, is a body without arms or legs. The same stand will do to model it upon.

There are many to be purchased of a small size.

It will be good practice to extend one of these to double the size.

If a larger one is purchased, then you may reduce it to half size, as instructed in the following chapter.

This will keep your work of a size that you can easily manage, and prevent its being either too small or too large for the present.

CHAPTER VII.

MEDALLION.

TAKE one of the boards, place it on the easel.

Make a rough outline of the profile or face you wish to model.

Now take a hammer and some tacks and knock in a few, so that they, while firmly set in the board, are about half their distance out from it.

Wet the board within the outline. Take some clay and commence to fill round and over the tacks, so that the clay has a firm hold of both them and the board.

Then work in your rough outline, keeping your work as flat as possible.

The head on almost any coin will give an idea of what is meant by this.

Proceed then to model in your work, using the tools as necessary, and then again smoothing with the fingers, much in the same manner as directed for the foot.

To reduce.

To reduce either of the foregoing, say, to one-fourth the size, take its length on a slip of paper, mark every inch, with the half and the quarter inches on it, from the rule.

Then gum or paste this down on the edge of your modeling stand.

With the compasses take the measure in inches from the cast model, and measure for the clay model in quarter inches.

You can, if you have them, use the reducing and extending callipers. The eye should give the detail proportionally, so that the principal measures are all that will be required.

Proceed as directed for the medallion, and then rough in your work bit by bit, going over it as before with the serrated tools, smoothing with the fingers and such tools as may be found requisite.

To extend.

To extend—I will imagine that you have a medallion of some three or four inches across from the nose to the back of the head, and that you wish to double the size.

You need only in this case take the measurements by the compasses; and then, marking them down one at a time, double their size on the edge of the modelling board or the paper fixed there as before in the reduction.

This will give you the sizes wanted. Knock in your tacks on the ground of the outline you have already drawn in, damp the board and rough in your work and proceed as in the medallion.

Basso-relievo.

For basso-relievo a drawing or modelling board, or one of the tops of the stand, being placed on the easel, as in the directions for modelling medallion work.

Hang up the cast of the basso-relievo you have purchased within easy reach and view.

There are many to choose from, but let it be as simple as possible. Moisten the board as before, put in the tacks, and roughly block in the figure or figures as in the other works.

Afterwards the drapery, if any, the features to a certain extent, and the hands and feet. Pay particular attention to these, and model in the features more carefully. Next finish the hair and the details in former manner.

Take care to keep damp with small pieces of wet cloth or linen the thinnest portions of the work, in addition to the wet cloth covering the whole of it.

Alto-relievo.

Purchase your cast of alto-relievo work of as simple a character as possible, so as not to be embarrassed by the quantity of work in it, and proceed to copy in the same manner as for basso-relievo.

In alto-relievo, however, you will find much more to do.

You will find it a good preparation for the whole figure or statuette. The alti-relievi on the Nelson Column in Trafalgar Square may be looked at as examples. The figures are partially detached in alto-relievo work.

Some pieces of wire, such as ordinary copper bell wire, or somewhat thicker, according to the size of the work, must be used.

Cut these into the requisite lengths with a pair of cutting pliers, and twist loosely.

They must be attached at either the upper or lower end, as found necessary, to small pieces of wood. These are to sustain those portions of the limbs that are in advance of the background or undercut, as they are termed. Bury these pieces of wood in the relief so as to be out of the way of the work, and you will find that thus you can move the limbs about, so as to place both arms and legs in the position that you wish. A small peg of wood stuck in between each of the

shoulders will enable you to turn the heads freely until their place is determined.

Cover these wires and pieces of wood with clay, holding with the left hand and modelling with the right until they are more finished.

The tools must now be used, the choice of them for the work being a matter of taste, according as they seem to facilitate or be suitable for the work.

Do all the work, however, with the fingers that can be done.

CHAPTER VIII.

THE BUST.

To copy an antique or other head, proceed as in the former chapter for the mask or face model.

Place the bust you intend to copy upon a stand, or column, or two boxes, so as to be of the same height as that you have commenced in the clay.

If you have the idea of pursuing your labours in the art, it will perhaps be both better and more economical to purchase the stand No. 3.

This can be elevated or depressed by the most simple movement, without any trouble.

It will also be very useful for other work.

Block in the head and the neck, rounding the clay off as you proceed.

Do not form the whole of the shoulders the first day.

Attach only some three or four inches on each side.

This is in order that the weight of the clay may not cause it to drop or settle down.

In the course of the second and third days the rest may be added gradually.

The work must be gone over as before, and the features paid as much attention to as possible.

CHAPTER IX.

THE BUST FROM THE LIFE.

IT is now time to come to one of the most important parts of modelling—the Portrait Bust.

For this to be properly executed, it will be necessary for more attention to be paid to the studio, the light of which should be some five or six feet from the ground at least.

The window should be darkened in the lower part, as before remarked ; the light will thus fall at an angle on the stand and the work it supports and the person whose bust is about to be modelled.

The subject should stand as much as possible, but a chair may be conveniently placed near so that he or she may not become too fatigued, but sit down at intervals.

The First Sitting.

Have all your tools and clay near to you, and make, if possible, a slight sketch in chalk or pencil, or a small rough model sketch in clay of your subject, in that position which seems to you the best for your intended bust.

This will probably be enough for the first sitting.

Between this and the next, prepare your larger model in the clay, with the head and neck blocked in, in the position indicated by your small sketch model, or crayon drawing, and you are now ready for—

The Second Sitting.

Having placed your subject as before, commence by modelling in the face, taking heed that it is sufficiently in advance of the neck.

You can easily advance the neck, if it requires it, afterwards to its proper position, while, if the face is kept too far back, the cross piece of the wooden stand that should be just across the shoulders, buried in the clay, will come forward and, besides being in the way of the work, look very unsightly.

Now model in, to a certain degree, the nose, the brows, and the chin; next the cheeks.

Next model the eyes and mouth somewhat roughly.

Indicate the ears and, generally, the shape of the head.

See also that you have given sufficient action in the turn of the head and the neck, and model in at this time some four or five inches on each side of the neck for the shoulders to be carried out on and completed in due course.

This will probably be enough for the second sitting.

In the interval between this and the third sitting you can block in more of the shoulders and commence to arrange roughly such drapery as you may have decided to give the bust, either as drapery or the modern costume.

From your small sketch model roughly commence the hair and whiskers or moustache, if any, and you will be ready for

The Third Sitting.

Every person has certain distinguishing points—a character, in fact—that go far to make the likeness, but then these must not be made too much of, or you will descend to caricature. You must be observant to seize the expression of the face at the early part of the sittings before fatigue gives a sort of tameness and fixity to the features.

Sustain, as far as possible, a conversation with your subject, to keep up the animation.

You must also endeavour to elevate the expression as far as possible, without being led into flattery.

Go on now with the modelling, correcting with a fresh eye any of the principal points that require addition or taking away from.

Pay great attention to the forehead, the chin, and the mouth. The eyes will next claim your consideration.

By this time the head should have a fair amount of resemblance.

See that the ears are in their proper position, and advance them a stage also, and you will probably have done sufficient for the time.

In the meantime, after your sitter has gone, or the next day or so, go generally over your work, improving it, but making no alteration in the face that may affect the fidelity of the likeness.

The Fourth Sitting.

Now strengthen the force of your expression in the brows (if a male subject), also slightly the chin, unless that should be a very prominent point, and by adding to the hair in its principal lines you will bring out, as it were, the features.

Go on to finish the face, ears, and neck, with the hair, working in the intervals at the drapery. The reason of this is that you will by these means bring all your work forward together, leaving only the concluding touches and corrections that may appear necessary from time to time for the next and the final sitting.

With attention and industry you should be able to bring your labours to a successful conclusion.

Keep your model damp and in good condition for work—

rather firm as the work progresses to completion. Stick a piece of stout wire or wood into the breast of the bust as soon as you have modelled in the face in the first sitting, so as to be in advance of the nose.

This will keep the wet cloth from rubbing it away and will save your work.

CHAPTER X.

STATUETTE.

IN this instance I will imagine that it is not intended entirely to design a figure or statuette, but to model from an engraving, or other copy, some work that has taken the fancy. It will greatly facilitate the execution and save much trouble in the manipulation if the position chosen is seated, as the rock-work will thus serve as a pedestal for it, and give a solidity that will be far more agreeable for the work than if it is erect, that requiring supports, &c., the arrangement of which may be embarrassing.

Some knowledge of composition is also required to arrange a figure in an easy and natural pose and to adjust the drapery.

For these reasons it may be better to copy as far as possible from an engraving or other work, as before suggested. Still there will be sufficient to tax the imagination of the amateur or young artist in composing and modelling those parts that are not visible in the engraving, such as the back, and with attention to the instructions that have already been given and the practice gained by having carried the other models, or at any rate some portion of them, to completion, there is little doubt the difficulties will be successfully surmounted.

One of the principal things to recollect in all small work is that it should be kept well damped.

This will save much disappointment and loss of time if attended to.

CHAPTER XI.

TERRA COTTA.

By the words 'terra cotta' we recognise clay that, having been previously modelled into form, has been burned in a kiln. The literal translation is *clay baked*. The subject is so important that more space is given to its explanation than was at first intended, and, therefore, two chapters will be devoted to it.

In no country in the world does better material exist for terra cotta than is to be found in England; and good work of this kind is more durable than either stone or marble.

Under these two words, Terra Cotta, we catalogue a number of works both antique and modern. The antique specimens have been discovered after between 2,000 and 3,000 years in as nearly a perfect state as when first made, in vases, statuettes, tablets, cylinders, and other varieties of sculptured and architectural decorative work, while the marbles and bronzes accompanying them were crumbled and cankered. The nature of the material they were made from saved them when articles of gold and silver were taken away, and have probably long since been melted down and otherwise disposed of.

The potter's wheel now in use is pretty nearly the same as sculptured on the walls of tombs in Egypt. It is supposed to have been invented in China, passed into Egypt,

and to the Arabians, Greeks, and Italy all about the same period.

Pliny speaks of an extraordinary dish made for the Emperor Vitellus as costing a million of sesterces, and, as these coins are said to have been of the value of somewhere about two-pence of our money, the enormous amount of four thousand pounds and upwards would be the sum paid for the execution of this piece of work.

A special furnace was built for baking this dish or vase in a field. Pliny also says it was customary to make the figures of the gods in clay, and that many remained in his time.

The remains of Pompeii and Herculaneum show some beautiful specimens of modelling in the ends of roof tiles, vases, and other works of art. In other excavations large quantities of beautiful works have been found.

The vases have generally been painted black on the original colour of the clay, that being a red or yellow. There are several cases of these vases in the British Museum. It is unnecessary to give a detailed account of their ornamentation, the styles of which vary, but the decoration mostly used is the dotted line, honeysuckle, and laurel. The subjects generally relate to the gods, the exploits of heroes in battle, banquets, military games, the chase, processions, and other customs of the Greeks.

The furniture, such as tables, chairs, couches, lamps, and the costumes, arms, mirrors, musical instruments, are exquisitely drawn. The form of most of these vases are of rare beauty, the commonest material, clay, being rendered so valuable by the talent of the Greeks that some in recent times have been sold for more than their weight in gold.

The greater number of them probably were turned, or, as the term is, thrown on a potter's wheel, but some have evi-

dently been moulded. The ornamental work would appear to have been drawn in outline while the vase was yet damp, and the painter was most likely guided principally by this, there is a slight glaze on most of them, but less on the figures than the ground work.

The Chinese, Persians, Babylonians, Indians, and Egyptians seem to have used a somewhat similar sort of meandering ornament, and even in Central and other parts of America pottery has been dug up with the same conventional decorative characteristics.

The celebrated Samian ware of the Romans was a red terra cotta. From the twelfth to the sixteenth century terra cotta was used by sculptors, who generally designed the architectural ornaments for buildings such as exist in some of the principal towns of Italy.

Bernard Palissy, the maker of the celebrated ware named after him, modelled natural objects in relief upon most of the articles.

It is said that some person of the name of Elers, about the end of the seventeenth century, came from Nuremberg to England, lived near Burslem, and afterwards removed to Lambeth, establishing the first kiln there.

There was also after this a pottery at Chelsea, specially patronised by King George II.

Between 1750 and 1780 potteries were established at Nottingham, Liverpool, Swansea, Leeds, Stratford, Derby, Worcester, Plymouth, Bristol, Coalport, and Burslem. At this latter place and Etruria, rather more than a century back, the foundation was made of a magnificent collection of works of art in artistic pottery and terra cotta by Flaxman and Wedgwood.

A little later the works of Coade were founded in Lambeth

for the manufacture of architectural forms such as friezes, vases, capitals and bases for columns, and copies from the antique, in statues, groups, and bassi-relievi.

Several sculptors about this time made many fine works for terra cotta.

At Lowesby there were works in 1836; and in 1849 the Earl of Leicester at Holkham caused many terra cotta architectural works to be executed.

Since 1851 Blashfield, at Stamford, has been instrumental in reviving the public interest in terra cotta by the manufacture of thousands of fine copies from antique and modern works of sculpture, as well as vast numbers of architectural forms.

There have been established also works at Ipswich, Darlington, Manchester, and Wisbeach.

Abroad there are works in Spain, Italy, Switzerland, Germany, Belgium, and Holland, and at Toulouse, and Sèvres in France. The latter important works have lately been almost entirely rebuilt, and contain a museum of beautiful examples of the manufactured articles, and the principal details of the process.

There are now several sculptors who model many of their works for burning as terra cottas, instead of in the modelling clay, and then having them cast in plaster.

CHAPTER XII.

MODELLING FOR TERRA COTTA.

CLAY, having been cleansed from all impurities, ground in a pug-mill, and mixed with a certain proportion of sand and such other materials as are customary or deemed necessary, is converted into a thick paste. It is then beaten up into pieces of convenient size of an even consistence, so as to appear smooth when cut.

Having purchased a sufficient quantity, you can commence your work.

The bust or statuette that is intended for the kiln must not have any internal support in the way of iron or wood. Build up the rough outline of the intended work in a cellular form. Whatever support you find to be necessary must be applied from the outside, by propping with pieces of wood, as a temporary measure, until the work is sufficiently firm and dry.

The modelling, with the above exceptions, may be continued in the same manner as in the other clay, according to the instructions in the former chapters.

For a medallion the work may be made from two or three inches diameter to any size that your modelling board will conveniently carry.

No nails must be used ; moisten the board well and the clay will adhere to it.

The model, being finished, can be left to dry. Great care must be taken that it does not twist or warp during this time, and it is for this reason that the supports must be continued, or even supplemented with others until it is quite firm.

Any cracks that appear should be filled up, and the arms, legs, drapery, or other accessories that have been cut off to be moulded must be joined on with softer clay, and supported in their places, and when these are dry and firm in their turn the work is ready for burning.

It must not be forgotten that the terra cotta when burnt will have shrunk, or been reduced in size, as much as from one-quarter to one-third less in size all over—for example a statuette or bust twelve inches high will be either nine or eight inches high—so in making a model it is as well to take this into consideration.

The model completed in this manner, when burnt in the furnace, will be a true terra cotta.

The time and trouble devoted to its production will doubtless be fully repaid, for after baking, if well designed and modelled, it will have a beauty that other works have not; no moulded copy equals the freshness of an original model.

Now, if you wish to make a terra cotta from any model you have executed previously, or that is in progress in the ordinary modelling clay, or already existing as a plaster cast, you must make a mould; and, as the sort of moulds for the production of works for terra cotta differ from the ordinary waste and piece moulds explained in Chapter XIV., a description of the process is now given.

Having mixed your plaster in the manner there stated, take some on the spatula, or round-ended knife, and spread it upon the bust statuette, or such portion of it as you are desirous of moulding, and as the plaster sets or stiffens, you

must carefully make it up at the sides and ends to an angle of about 45 degrees—thus you have made a piece of the mould. Repeat this until the work is covered, brushing the edges with some of the *moulding composition*, so that the one piece will relieve or become detached from the others when requisite. Remove the pieces from the model in the reverse order to which they are made, and put them together. A box or intaglio copy of the model will be the appearance presented.

If the moulds are small, they will be sufficiently strong if bound together with string or wire.

But if larger, or where there are a number of pieces (each having some marks or holes scooped in them), these must be coated with the composition before they are removed from the model, and then a larger piece or shell made to cover them in the same way; and may require some wires or pieces of iron inserted while the plaster is still soft in order to strengthen the mould.

As the plaster will set as you go on, piece by piece, when all are finished the model can be removed as above directed.

The mould being carefully put by till dry, a number of copies may be taken from it similar to the original model, as hereafter detailed.

These will, when baked, be of a somewhat smaller size, because there is a shrinkage or reduction by firing, sometimes amounting to as much as one-third, according to the degree of firing or the character of the clay.

The mould, or moulds, being quite dry, the clay being in a plastic state, is firmly pressed, little by little, with the fingers into the moulds. The pressed clay copies must then be taken carefully out and allowed to dry. Medallions, bassi-relievi, and some other works are now ready for the kiln.

However, as statuettes are very seldom moulded entire, but have the projections, such as pieces of drapery, arms, or legs, cut off and moulded separately, these must, as before stated, be joined with soft clay, and then the seams or lines, as the marks left by the joints of the mould are called, must be taken off by ivory or metal tools, and the finishing touches put to the work by the necessary undercutting and reparation of surface defects.

The operation of burning or firing, as the baking of modelled works of art is called, in common with all pottery in the furnace or kiln, is not one that will much concern the reader, unless determined to purchase a portable kiln, and burn or fire some small pieces of work at home.

But as the latter may be the course taken by some, I shall have a few words to say on a subject that otherwise would have been, if not omitted altogether, at any rate disposed of very curtly.

Small kilns and muffle furnaces are sold at prices varying from ten shillings to as many pounds, according to whether they are for the ordinary kitchen or other stove, and may be used with coal, coke, charcoal, and wood, or with gas, according as they are made. They are of fire-clay, mostly in the shape of a square box, and there is a hole for receiving a stopper and another for a chimney.

Having placed the work to be fired in the kiln, the lid should be luted down or stopped with soft clay. Now light the fire, place the kiln on it, and gradually fill it up with fuel so that it is embedded, as it were, for quite two inches all round, but none at the top. The small hole in the stopper should be free. When the whole has become of a white heat, and this may be in an hour or more, according to the size of the kiln used and the size of the fire, the heat may be

gradually allowed to slacken, and, after the fire has gone out, the kiln or muffle can be removed. Let it stand a day before you take it out, so that the air may not be admitted too soon (for in that case the work will be almost sure to crack), and then the medallion or other model has become terra cotta.

For those who do not wish to be at the trouble of burning articles for themselves small works are fired for a charge of a few pence by Messrs. Lechertier, Barbe, & Co.

The furnaces of the potter are of all sizes, from a few feet in diameter to those large kilns used in Staffordshire and elsewhere, or that may be seen from the South-Western Railway, or the River Thames, when passing the Lambeth Potteries; they are very thick and bound with iron so as to prevent bursting when red hot within. There is but little difference in their plan. The works to be burnt are packed in fire-clay boxes, and stacked or placed one over the other, a considerable amount of care being requisite for this. When full the doorway is bricked up and bolted with pieces of iron, and the fires are lighted in the furnace holes round the kiln. In some cases the fire is very gentle at first, and a greater heat arrived at afterwards. In others the firing is more regularly continued for four or five days. The heat, however, must be sufficiently intense to bake the contents of the kiln by partially vitrifying without melting or warping them.

A large kiln takes about a week to cool. The opening of the door and removing the works is easily performed; but, as sometimes great destruction takes place by cracking or distortion, there is always an amount of interest and excitement attending this.

CHAPTER XIII.

MODELLING IN WAX.

SMALL profile medallions may be modelled in wax by those who have not the convenience of space or the time to give to modelling in clay.

This work can be commenced, set aside for an indefinite time, and then recommenced without injury, and will require in the meantime neither thought nor attention. The materials used are few and inexpensive.

Some modelling wax.

Piece of slate or glass ; a small box to contain it.

Some tools, either of metal or ivory, or of both materials ; or a portable case can be purchased containing the whole suitably selected.

The wax must be warmed, and a design having been traced on the slate fill in with wax. Continue the work with tools, much in the same manner as if modelling with clay a small medallion. If a glass slab is used, you may place your design on the other side of it. Fill in as before directed and finish at leisure. The box or case is then shut up and your little studio is closed until you again wish to continue your work. This style of work can of course be carried about without any trouble.

Different shaped boxes or cases will contain small busts, statuettes, &c., all of which may be modelled in wax.

Various colours of wax may be used, if desired.

When your medallion is finished, if desired it may be moulded by covering it with plaster, but the groundwork round it should be brushed over with the moulding composition previously, so that the mould will relieve from it.

When the plaster has set take the mould off, pick out the wax, and a cast can be made from the mould, or it can have clay pressed into it for a small terra cotta.

CHAPTER XIV.

CARVING IN MARBLE AND ALABASTER.

SMALL medallions, as previously mentioned, also those of somewhat larger size, may be carved in marble or alabaster, a sort of soft description of marble (much easier to cut) without previous practice, upon prepared plaques or medallions with their models. These may be procured ready for use.

The tools necessary are simple and inexpensive : a hammer, some chisels, small rasps and files, and a stone to sharpen the chisels on.

The piece of work being firmly secured by plaster to a piece of stone of a somewhat larger size, so as to be solid and not move about while being worked upon, must be chiselled into the form requisite by light working.

In the case of alabaster the hammer is hardly necessary, as the tools can be held in the right hand and guided with the left, and most of the work scraped out.

This may also be done as the marble is being finished, but the small rasps and files will have to be used for both materials. The finish can be put on by a small pointed stick, used with fine sand and water ; and the work can be polished to a certain extent after if desired. The groundwork of the medallion or plaque may be coloured—this will give the effect of a cameo.

For carving in marble and alabaster there is much more to be noted in the process and handling of the tools than can well be expressed verbally. One or two lessons will give a far better idea than the explanation given in the limited space afforded to it here.

CHAPTER XV.

MOULDING AND CASTING IN PLASTER.

To mould is to make a concave shell in plaster or other material from a model.

To cast is to execute a copy from this in plaster.

There is also a mould, called a piece or safe mould, to produce a number of copies.

Gypsum, having been ground in a mill to a powder, is then baked in ovens. It is thus converted into what is generally known as plaster-of-Paris.

Of this material there are several qualities. The finer sorts are obtained by passing the plaster through sieves of various sizes. The finer qualities only are suitable for the purpose mentioned here, and are of a pure white colour.

Plaster mixed with water to the consistence of cream can be used with facility as it thickens rapidly, and will harden, or set, as it is called, in about fifteen to twenty minutes.

The quantities given here are only for small work ; indeed, for larger the labour is too great, and the work is not then suitable for unpractised hands, or for other places than professional studios or the experienced workman.

Small objects may be executed in a room, if the following instructions are carefully attended to.

Much, however, depends on the way the plaster is mixed and then applied, and if this can be seen once or twice it will materially facilitate the labours of the student.

Provide yourself with the following articles :—

Two bags of Robeson's or Bellman's plaster-of-Paris, one marked F, or fine ; the other S, or superfine.

Two wide-mouthed jars, with covers, sufficiently large to hold these quantities of plaster, a small basin, a larger one to hold about a pint and a half, a jug of water, two or three brushes of various sizes, a steel spatula and knife, two or three small plaster tools, an iron spoon, a little yellow and some red ochre in powder, a small mallet, two carpenter's chisels, one half an inch, the other an inch in width (*not sharpened*) a bottle of the moulding composition, and a sheet or cloth to lay over the carpet.

The plaster made by the above-named manufacturers is the best ; it can be obtained at most of the artists' colourmen, or can be had direct from the works by a small extra payment for package. Much of the other sold is only fit for rough work. Be careful to keep it in a dry place.

If the work is a medallion—and perhaps it will be as well to make your first mould as a trial one on a piece of clay, roughly formed like one—the work is easy.

First brush over the groundwork all round with the moulding composition. Mix a *little* of the red powder with some water into a paste in a basin, then add more water until the basin is three parts full, put your plaster in until it appears as a sort of hill in the basin with some water all round, beat it up with the spatula, and pour or spread it over the model, say to the thickness of an inch, or nearly so, all round and over it.

Let this set ; it will be better that it is not touched for an hour or so.

Then lift it up and it will relieve from the groundwork ; you can now pick out the clay.

Soak it for about ten minutes in the pan of water; then, while in the water, brush it carefully so as, while leaving it clean, none of the fine parts are worn away.

Now place it on the table, and, to take the cast, mix your plaster; then see that there is no water left in the mould, which should only seem just shining with the damp.

Pour some of the plaster in, shake it gently, lay the mould down and fill up with the plaster.

Let it rest for, say, an hour or longer, then turn it over, take your mallet and chisels and gently cut and break away the mould, which is no longer of any use, and is for that reason called a waste mould.

The white cast will soon show itself in places, and, with care, relieve from the coloured mould.

The work is then complete, and you have the plaster cast.

In moulding a bust or statuette it must be borne in mind that there may be two or three pieces to make, according as the work varies in form. Therefore, a distinct portion of the model must be coated with plaster at a time—the red can be used for one, the yellow for the other—the edges made carefully up and a few holes scooped in them with the round end of the knife.

Then brush them over with the composition, and apply the plaster for the next piece. When the mould is quite set, or hard, divide it and pick out the clay.

Soak it and brush clean, then bind it together with strong string.

Mix the plaster and pour into the mould so that it evenly coats it, shaking and turning it frequently until the plaster is thick and does not move any more.

Two or three mixings will be better than one, and the cast is not to be made solid but only of a sufficient thickness.

A leaf, piece of fruit, fish, small bird, or a hand may be cast from nature, but to be properly executed should be previously prepared, or the mould will be spoilt and the specimen also.

A piece or safe mould may be made from a plaster model. This is done as follows:—

See that the model is dry; next brush it over with the composition until it will absorb no more, but appears shining on the surface.

Mark your spaces for the pieces in pencil so that they do not cover too much of the work and thus be caught by projections on the surface.

Mix your plaster, spread with the spatula or spoon, make up the edges to an angle of about 45 degrees, scoop some holes in them, and add piece by piece until covered. Make some marks, deep scratches, and shallow holes in the pieces, and brush over with the composition.

Mix the plaster and pour it over with the spoon or the small basin until you have a shell of sufficient thickness, say, three quarters of an inch or so.

It will probably be necessary to lay on or insert some pieces of wire or thin iron while the plaster is thickening so as to strengthen this.

The shell may have to be made in two or even three pieces, according to the form of the model, and, for the same reason as the smaller pieces, are not to cover too much of the work, but to relieve easily.

When quite hard turn over on the table, take off the pieces in the reverse order to which they were made, put them together, and tie or bind up the mould with strong string.

You have now the piece mould completed, and when this is quite dry you will be able to take casts from it.

This may take a week or more, but may be hastened by placing at some distance from the fire or in some warm place. When it is so take it to pieces, brush over the whole of the inside pieces, and the inside of the shell, with the composition until they will absorb no more and the interior of the mould is shining with it, and put it together and bind up with the string.

Mix and pour the plaster, as before directed, until the whole is evenly coated of the requisite thickness all over.

Let it rest, say, half an hour or longer, then take to pieces.

You have now, if the work has been done properly, a plaster cast from the piece mould.

This will have a number of lines or seams left from the joints of the mould.

These lines or seams will have ultimately to be trimmed off with the steel plaster tools, or a file, or rasp, as may be found most suitable when the cast is dry.

The mould should be brushed clean, put together, tied up, and placed aside until again required to be used for other casts.

CHAPTER XVI.

CHASING AND EMBOSSING IN BRONZE AND SILVER.

CHASING in bronze and silver may be executed with a moderate amount of care and attention upon medallion or small works in relief.

For these select or make a model in profile, after the style of the head on a five-shilling piece, but of double or three times the size. If in a bolder relief so much the better.

It must then be cast in either bronze or in silver.

This is done by making a mould of loam, mixed with sand, upon the model ; after this is done, an inner part, or core, as it is termed, is made.

There is a space left between these two, and into this the melted metal is poured.

When the metal is cool the mould and the core are broken away ; the metal cast then comes to view, a copy of the model.

The edges of this are roughly filed, and the metal medallion is ready to be chased.

The surface is slightly rougher than the model, and may, perhaps, have some trifling excrescences.

It is the business of the chaser to make all this smooth and ready for colouring, and this varies according to the metal.

If the model is not larger than above stated, it can be produced by electro-metallurgy, or the Galvano-plastic process ; the copies are then called Electrotypes. In this case the sur-

face will be found to be much finer than when made by the sand mould.

The articles required for this work are an iron ball and cushion, some hard cement to fix the work to the ball, one or two small chasing hammers, and some chasing tools and files.

A sufficient quantity of the cement having been softened by warming it, it is pressed on the ball and the medallion or relief is embedded in it.

The cement will quickly become hard, when the work may be commenced.

The features must be filed smooth, and together with the hair and drapery chased with the tools and hammer.

The groundwork should also be filed until smooth.

The composition powder must now be used upon it, either with oil or water, and piece of pointed stick.

The cement must be warmed and the work taken off the ball and brushed off, and it is ready for the colouring, or it may be allowed to receive that naturally by exposure to the air.

There are other ways of polishing or giving the final smooth touches, but the above will be found to answer every purpose for small work.

Embossing, or Repoussé, is more difficult, but to anyone who has done anything in the way of seal engraving or intaglio work it will be readily understood, and with a little application and patience may be successfully carried out.

Always let it be distinctly understood, for work not larger than before stated, a smaller size will be even preferable for this process.

Take a piece of *thin* copper or silver, scratch in on one side of it a simple and bold design that you wish to reproduce such as a leaf of ivy, or a head in profile.

Warm the cement, and fix the metal on the ball with the scratch side uppermost.

Having procured, in addition to your other tools, three or four that are round faced, punches of different and suitable sizes, with these and the hammer block in roughly the design to the same depth as your copy appears to be in relief.

The leaf, head, or otherwise, being thus punched out to something like the required shape, the piece of work may be taken off the ball and replaced on the other side. You can now proceed to work with the fine punches and chasing tools.

The plate of metal must be turned from time to time, so as to work from either the hollow position or from the front as may be found necessary, until finished. It can then be smoothed with the composition, or stick, or left from the tools as fancy may dictate.

Niello work is a mixture of chasing, punching, and engraving on a piece of either flat or curved metal plate ; all the work is done from the upper side.

The thin metal, either silver or copper, must be cemented to the ball in the usual manner, and the design scratched in.

Any simple pattern, or even landscape or interior view, is executed in this style ; some portions are filled in with a black enamel. The work is of Russian origin, but is now executed in France and England as well.

CHAPTER XVII.

CONCLUDING REMARKS.

IN the foregoing chapters I think that enough has been said to interest the aspirant in the art, and to enable some considerable advance to be made with moderate industry and perseverance.

It was a maxim with Sir Joshua Reynolds that with such qualities every degree of ability might hope for success.

Bear in mind that the knowledge of form can only be gained by close observation and continual study.

Genius may perceive more quickly, and thus aid in acquiring the art more easily.

But no knowledge can come from intuition, though most that is known can be taught.

It is not intended within the limited pages of such a little book as this is either to form a history of sculpture or to go deeply into the practice of the art.

No other object is wished to be attained than to aid the aspirant and instruct those ignorant of the principles of Modelling to make some progress. All sculptors have their own style, each almost (in some cases quite) as distinct as handwriting; and though generally formed on a careful study of the antique and nature, and assisted by some eminent master of the art, still there remains a touch and handling that are a part of the individual.

It is a somewhat difficult task to give the description of a process or processes of manipulation, and perhaps more can be

learned in an hour's lesson than by the work of weeks without such aid.

As the whole of the necessary articles for the work can now be procured from Lechertier, Barbe, & Co., at a price within the range of most means, one of the difficulties hitherto besetting the amateur and student is removed.

And I trust that if they are employed the result may be, if not profitable, at least a source of pleasure. Another perplexity disappears by the publication of this book, for it is to give assistance and instruction that I have compiled it.

I confidently hope it will lead to a greater appreciation of sculpture generally, and particularly those works that have descended to us from ancient times, and have been objects of admiration to all persons of well cultivated mind from the period in which they were executed to the present.

In conclusion, I would only impress most earnestly on amateurs and students to take every opportunity of seeing collections of sculpture. The British and South Kensington Museums, National Gallery, Crystal Palace, Flaxman Gallery, at the University College, Gower Street, Euston Road, and the collection left by John Gibson, R.A., to the Royal Academy, on view at that Institution, Piccadilly—are the principal.

Survey and study of these examples, some original, some copied from the originals from all periods and schools—an infinite variety of the different styles of art—will conduce to improve the mind.

It will also accustom the eye to form, and consequently insensibly influence the work of the hand.

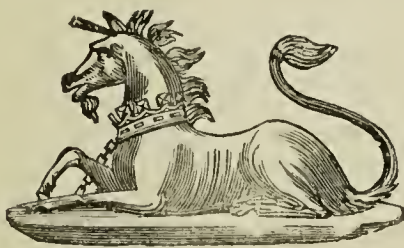


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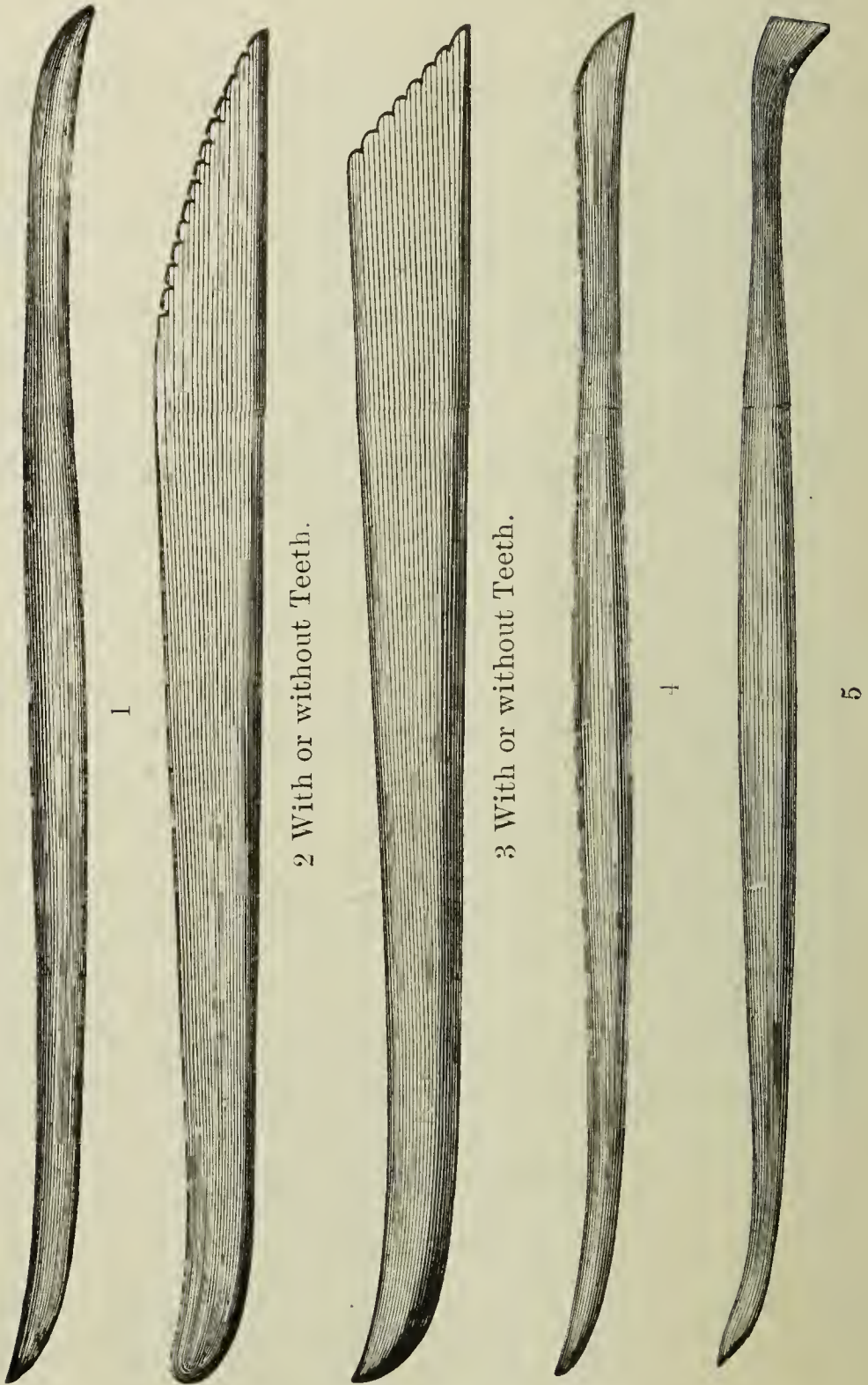
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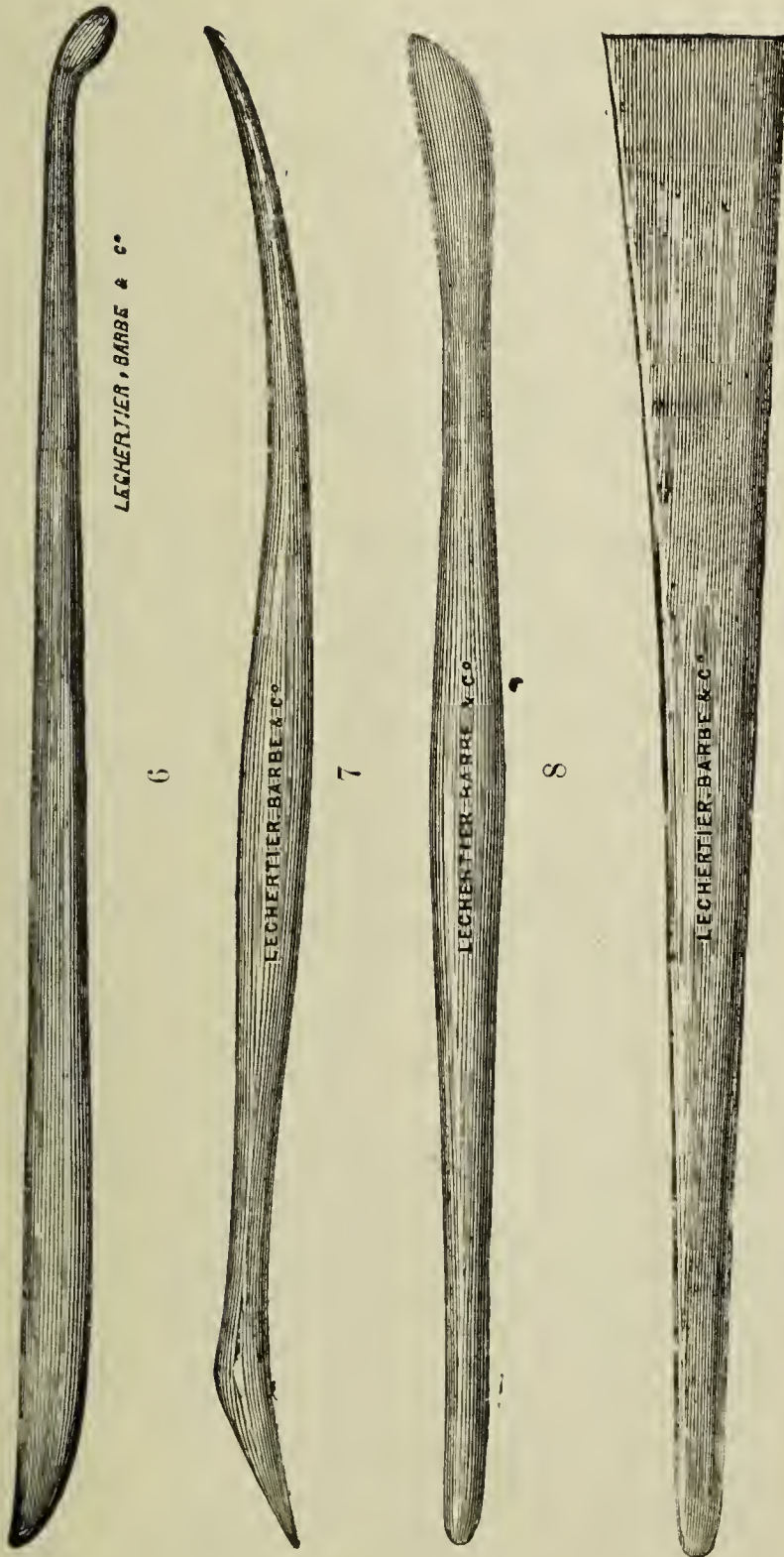
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